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Docket: 1364.1001-D2/RAG

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Dale Tyson ROBERTS et al.

Serial No.: 09/354,166

Group Art Unit: 2758

Filed: July 16, 1999

Examiner: V. Vu

For: METHOD AND SYSTEM FOR ACCESSING REMOTE DATA BASED ON
PLAYBACK OF RECORDINGS

DECLARATION UNDER 37 C.F.R. 1.131

RECEIVED

Assistant Commissioner for Patents
Washington, DC 20231

MAY 28 2004

Technology Center 2100

Sir:

We, Dale Tyson Roberts and Ann E. Greenberg, citizens of the United States of America and respectively residing at 15 Oak Springs Drive, San Anselmo, CA 94960 and 2355 Carquinez Avenue, El Cerrito, CA 94530, declare that:

1. Attached as Exhibit A are five unnumbered pages from a draft business plan that was distributed on April 16, 1996 to the employees of ION, Inc., the original assignee of the parent application.

2. Attached as Exhibit B are pages 11-31 of another draft business plan for ION, Inc. The date, July 28, 1996, at the bottom of each page of Exhibit B is the date that this draft of the ION business plan was received via facsimile by me, Ann E. Greenberg.

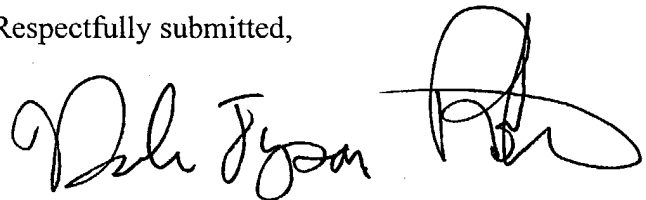
3. Prior to March 28, 1996 we had conceived of a compact (CD) control application running in a web page which could control a local CD-ROM player, retrieve the track lengths (TOC information) of a CD, transmit the TOC information to a server and receive the address

(URL) of a corresponding web page. The application then automatically loaded the web browser with the URL to display the corresponding web page containing information related to the CD.

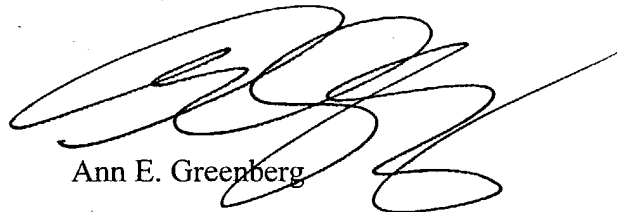
4. By March 28, 1996, (a) we had created a table of CD identifiers and had written C++ code as a plug-in for Shockwave (a product available from Macromedia, Inc.) for exact and fuzzy CD identification as disclosed in the specification of the application and (b) at our direction Lingo script (used by Shockwave) had been written to perform CD control (play, stop, pause, forward track, previous track), CD identification, and retrieval of related URLs from a server. The tested Shockwave application recognized several audio CDs and took users automatically to appropriate fan sites on the Internet.

5. All statements made herein of our own knowledge are true and all statements made on information and belief are believed to be true, and furthermore these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application of any patent issuing thereon.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Dale Tyson Roberts", with a large, stylized flourish extending to the right.

Dale Tyson Roberts

A handwritten signature in black ink, appearing to read "Ann E. Greenberg", with a large, stylized flourish extending to the right.

Ann E. Greenberg

Date: 6/30/2000

THE PRODUCTS

Opportunity

The world-wide-web provides an unprecedented opportunity for ION's CD technology. The most popular business model for the web is currently advertising. In order to generate advertising revenues, a site must have traffic. Drawing many people to one's site is a real challenge - currently the web is somewhat of a collection of many sites, each of interest to few. The first companies to provide compelling entertainment on the web will have an advantage over the next entrants as they build brand recognition. One thing that the web has been successful in doing is building communities - through chat or interest groups. From the constatation that people like to chat on-line springs the question: what else can people do together on-line? They can play (several companies are developing on-line multi-user gaming systems); chat while browsing the web together; chat while listening to music together; play music, et c.

ION believes that people will want to chat together while listening to music. Music is a natural filter to select people one might want to speak to. Teenagers will want to "hang-out" while listening to their favorite albums. The enormous popularity of MTV's "Beavis and Butthead" series is immediate proof of the concept that real-time critique of music is appealing to a large audience.

Because of ION's MUSILtm technology, the bandwidth problems that would be associated with synchronized chat over a Real-Audiotm stream just disappear, as for the most part users themselves provide the music.

With improvements in bandwidth, ION can enhance Aspen to make it the ultimate music site on the web. ION will prepare for this with a CD-based interface that will provide the graphics and animation.

Aspen is positioned for success given current computer trends. There is increased talk of the computer "moving into the living room", becoming an "entertainment machine", perhaps in the form of an "internet set-top box" sitting on top of the television. In order to make it into the entertainment center of the home (the television), internet sites will have to be entertaining. Most web pages will have a hard time making it to the TV set. Aspen, which is tied to audio CDs, which belong into the living-room in the first place, will have one of the easiest transitions of all.

ION's business plan relies on the premise that ION can provide something that most others can't: music-based entertainment on the web. This competitive advantage is based on our extensive experience with interactive music products, and on our MUSEDtm technology. This enables us to capture a large audience of members, about whose tastes we can learn by keeping track of the CDs they play. This large audience and our privileged information on our members enables us to provide services to advertisers, from basic billboards for generic sponsors to high value-added for content providers, such as a virtual record release party targeted narrowly at the most likely buyers.

ION's products are targeted at two different groups. The end-user product, *Aspen*, is made available for free to members of the service. The client services are targeted at music labels and other corporate sponsors. ION's ability to generate revenues off client services relies in large part on our ability to make Aspen a compelling end-user product.

Aspen - the end-user product

The site will grow from a simple but original concept to a complex virtual venue. Aspen's front-end development is broken down below into different phases.

Phase 1: Web Listening Rooms

Aspen will have 100 listening rooms: five for each of the top ten Billboard albums; forty for member-selected albums; and ten for the purpose of rental to music labels. Each listening room will hold up to twenty users. Upon connection, Aspen will scan members' CD ROM drives and determine whether a CD is in there. Aspen will examine the CD, and if it recognizes the CD as one being played in a listening room, it will automatically route the user to that room. This is accomplished by using ION's proprietary CD-SUSTm technology (CD-URL Selection). Otherwise, Aspen will provide the member from a list to choose from, and, if some empty rooms are available, will let users set them up for CDs of their choice. If rooms are available and the member's CD doesn't match any being played, Aspen may automatically create a room for the CD, prompting for information on the album if it is not yet part of the database. The inside of the listening rooms will be set-up as follows:

- **Chat Window.** As the member enters the space, his or her CD synchronizes to the room's master clock and skips to the part of the CD everyone else is listening to. Members thus have a common music background, and can chat regarding the album's few last riffs or any other topic they choose. Because members are required to own the CD in order to enter the room, members inside a room will tend to have more affinity than a group of randomly assembled people. If a member does not own a CD but is still curious to hear it or check its associated chat room, then he / she can enter the room under restricted conditions. First, the member will be able to read the chat, but not to write, thus disabling undesirable interference from people desirous to thrash an artist. Second, the user will receive a stream of Real-Audiotm synchronized to the CD, but that stream will be broken (e.g. one-second silence every fifteen seconds), thus creating "wish-you-were-there" feelings and inciting the user to buy the CD ("buy buttons" connected to an on-line fulfilment store will facilitate such transactions).

- **Synchronized Graphics Window.** This window displays graphics which are synchronized to the music. These can be video, pictures, animations, highlighting lyrics, et c. The window provides a synchronized enhancement to the CD experience, making it something of a "Net Enhanced-CD". Music labels will have an incentive to provide elements for these functions as a way to enhance the listening experience for their CDs compared to those of competitors.

- **Surf Window.** This window enables members inside the room to surf various web pages together while listening to the music. Users can select from a set of bookmarks related to the album (e.g. band FAQ, discography, et c.).

- **Control Functions.** Rooms can be set-up with different control parameters. In a **Linear Listening** room, the CD plays from beginning to end without interruption. Members control their own surf windows. In a **Guided Listening** room, one user controls the experience. With the help of an on-screen "remote", the controller can skip tracks, repeat passages, choose pages to display in the surf window, et c. Users with long experience on the service could be given those special privileges, along with the usual policing attributes of chat-room moderators (e.g. "boot"). In a **Collaborative Listening** room, the remote changes hands from member to member. Providing control to the users gives them the power of illustration, e.g. "I love these two bars".

- **Automatic Notification:** members receive e-mail notification of the next time their favorite CD will be played in a listening room - even for eclectic bands, a good-size audience can be gathered by posting notices to the appropriate news group.

Phase 2: Virtual Venue

Aspen will expand out of its small listening rooms into larger listening halls. When members log on, they will have several destinations from which to choose. The listening rooms will still be there. The other rooms / features will be:

1. • **Stage.** Scheduled events will take place. For instance, there will be broadcasts of concerts, with an associated video screen. The broadcasts, which may be real-time or retransmitted, will provide the broadcaster with an opportunity to sell merchandise. The stage may be used for a number of other purposes. For instance, it can be rented by a record company wanting to do a release party for an album. The concert hall will provide a larger audience than the listening rooms, and will let the label broadcast whatever they want - as opposed to a CD simply playing. The label can broadcast a number of elements concurrently (text, audio, images) to maximize the impact of the release party. Sweepstakes for the new CD can be used to lure people on-line.
- **Green Room.** This is a place where members can hang out before an event happens on the stage. In the case of a concert, members might be able to walk through the guitar player's guitar collection, take a tour of the dressing room or sample advance material.
- **VIP Room.** A place for music industry people to hang-out, exchange gossip and conduct business.
- **Foundation Room.** Special room for the people who built Aspen (underwriters / corporate sponsors).
- **Back-Stage.** To access the back-stage, one must be an active member, as defined by having been a member for over a month, having accessed the site more than ten times overall and having accessed Aspen at least twice in the preceding month. The back-stage will feature after-show parties and pre-edit cuts of the events' best moments.
- **DJ.** One room of the venue is animated by a DJ. The room provides the usual chat functions.
- **Audition Room.** This will be a place for new bands to broadcast their music. This will be a good way for new artists to gather feed-back, as the audition room will let users rate each individual tune, and as the room will also accomodate chat functions. Because of the ease with which new artists will garner feed-back across a broad section of listeners, the audition room can become a quite sophisticated A&R tool for A&R executives, who will have at their fingertips a novel way to gauge what might or might not sell.
- **Open Mike.** Members stand in line to broadcast music pieces.
- **Jam Rooms.** Users can connect their musical instruments to their computers and jam on-line with members thousands of miles away.
- **Store.** Members can visit the store to purchase CDs, tickets and merchandise. Store functions are also integrated throughout the venue with "Buy" buttons.
- **Marquee.** A marquee announces upcoming events, e.g. Soungarden at 8PM.

Phase 3: 3D Interface with disk-based version

In phase 3, ION will release a VRML interface for the virtual venue. The interface will provide the appropriate graphics for Aspen to run smoothly with a sharper look. The disk will install the VRML interface to the hard-drive. The VRML interface will be of great help in navigating the venue, making the passage from one room to another very intuitive. The venue will expand to include thematic rooms, among which users will be able to travel. These will correspond to different music styles, loosely defined as **rock, country, urban contemporary, pop, rap, gospel, jazz, classical, oldies, soundtracks** and others.

The disk will come with three modules that will enable users to customize the Aspen experience:

- **Avatar Builder.** This program allows users to choose a look with which to navigate the venue. Users will have a few basic avatars to choose from which they will be able to customize, or they can decide to design their avatars from scratch.
- **Room Builder.** This program allows users to design listening rooms. Users can design the

appropriate listening room for their favorite artist, and upload the room to the site. If the design is retained, it is made available to high-bandwidth users whenever the appropriate CD is played. A listening room could look like a train carriage, a recording studio or a grandiose ballroom.

- **Venue Builder.** This program contains the appropriate graphics for a number of real concert halls. By installing the graphics to their hard-drive, users can customize their Aspen experience to make the environment look like the venue of their choice, e.g. Carnegie Hall, the Oakland Coliseum or a structure based on a combination of several others. Eventually, one can imagine real venues distributing the appropriate Aspen graphical add-on on CDs. Depending on their musical preferences, users can make Rock be the main room, with doors to navigate to the Jazz room and the Classical room, et c.

ION will incite music labels to place things on the CD that are compatible with Aspen. For instance, at the end of the audio track, labels could as a matter of routine add a few standard files (e.g. lyrics, cover art, video for the single, graphics for the album's listening room, et c.). Those standard files (which in a way would make the CD the equivalent of an Enhanced CD without an interface - the interface being Aspen) would be retrieved by Aspen during playback, and would allow to overcome bandwidth limitations.

Phases beyond...

ION will continue to improve Aspen such that it retains its edge as the most entertaining music site on the world-wide-web. Although it is hard to strictly define today what the future features will be, the realm of possibilities, based on the technologies to come, is really endless. Some possible extensions could be:

- use of **video conferencing** within listening rooms,
- as the membership base grows, ads will become increasingly targeted and relevant to individual users, e.g. check this band in your town next week,
- extension of listening rooms to viewing rooms for **DVD**,
- application of **algorhythmic music composition** to enable non-musicians to join a jam session in a meaningful way,
- use of **agent technologies** to guide users to new content they might like,
- the database of CDs owned by users would make it possible to complement the listening rooms by quasi-human computer **HAL** to whom users could ask advice on which CD to choose that they all own and like,
- addition of a new type of listening rooms called **Neighbor Rooms** - as the user logs on, she is steared into a room filled with people who share the same type of tastes; Aspen then recommends CDs for the listening session based on which CD the members in the room own.
 - addition of a **bar** to the list of rooms on the venue. The bar may be linked to some actual Cybercafes where Aspen stations will be mounted with digital cameras. The stations will enable actual interactions between the bar-based users and those accessing the Net from other locations,
 - improvement of the audition room, where instead of playing tapes of aspiring artists, Aspen will make live broadcasts from a **broadcast van** parked outside people's garages,
 - improvements in bandwidth and avatar technology may make it possible to have a **virtual mosh pit** in front of the stage,
 - improvements in bandwidth through satellite or cable modems, combined with the advent of set-top boxes, will call for a special **TV format** as the Aspen user moves from the computer desk to the living room's sofa,
- et c.

Client Services - the revenue model

By successfully patenting MUSII., Aspen will be a unique system that will provide a level of entertainment quite extraordinary for the web. This will in turn lead to high traffic on the site, which is key to generating advertising revenues - currently the most popular revenue model for content-oriented web sites. Aspen's clients fall into two main categories: generic corporate sponsors and music labels. For these two types of clients, Aspen will offer different products:

Corporate Sponsors Products

ION will provide "real-estate" on Aspen for billboard-type advertising. Space will sell by the month. The ads can be simple banners or complex virtual product demos, which ION can create as ancillary production services. ION's Shockwave expertise will let us seamlessly integrate those into the interface. For instance, for a month whole listening rooms could take the shape of a Nissan Pathfinder, where car controls would correspond to chat controls, with chat appearing on the windshield, et c.. Billboard ads, which can live in different rooms of Aspen, may be generic or targeted. For instance, when logging on, a 44-year old who listens primarily to jazz might receive an ad for Scagrams gin, a car or a jazz concert in her town; while a grunge teenager might receive an ad for Bunana Republic, a new movie or a subscription to Net Gamer.

Music Label Products

ION will provide music labels with three basic products:

- Billboard advertising triggered when specific CDs are played,
- Narrow-cast conduit into their customers - Aspen will let labels provide targeted advertising to members based on what CDs they play (e.g. if one listens mostly to alternative music, "Have you heard the new Black Grape album? Sample it here").

Ancillary Products

ION will provide both generic sponsors and music labels with the following products:

- Production services
- Transaction processing
- Tailored data reports and mailing lists

In addition, ION will license its technology to third parties for uses that are not competitive with Aspen. For instance, CD-SUS would be of great value for an on-line tech support service, where users insert their CD ROM, the site recognizes it and switches to the appropriate support page; or for a multi-user on-line gaming system, where users insert their CD ROM and the system switches to the appropriate page.

us to capture a large audience of members, about whose tastes we can learn by keeping track of the CDs they play. ION's privileged information about NMC's members will enable us to provide unique products to our advertising clients, such as the ability to target listeners of a specific band.

The Net Music Channel is positioned for success given current computer trends. There is increased talk of the computer "moving into the living room", becoming an "entertainment machine", perhaps in the form of an "internet set-top box" or "Network Computer" sitting on top of the television. In order to make it into the entertainment center of the home (the television), internet sites will have to be entertaining. Most web pages will have a hard time making it to the TV set. NMC, which is tied to audio CDs, which belong into the living-room in the first place, will have one of the easiest transitions of all.

The Net Music Channel - the end-user product

NMC will be membership-based. Users will be uniquely identified at login time through whatever scheme is available (type-in password, automatic password, ICODE, cookie, digital certificate). While the full-featured channel described here will be accessible only for a fee, ION will also provide a free version of NMC which will also require registration and will have restricted features. NMC's development phases will roughly correspond to the release of the channel's various programs.

Program 1: Listening Rooms

Initially there will be 100 listening rooms: five for each of the **top ten Billboard albums**; forty for member-selected albums; and ten for the purpose of rental to music labels. Each listening room will hold up to twenty users. Upon connection to the program, NMC will scan the user's CD ROM drive and determine whether it contains a CD. NMC will examine the CD, and if it recognizes it as one being played in a listening room, it will automatically route the user to that room. This is accomplished by using ION's proprietary CD-SUS™ technology (CD Systematic URL Selection). Otherwise, NMC will provide the member with a list to choose from, and, if some empty rooms are available, will let her set one up for the CD of her choice. If rooms are available and the member's CD doesn't match any being played, NMC may automatically create a room for the CD, prompting for information on the album if it is not yet part of the database. A schedule announces listening times in the different rooms. The schedule is important in creating a sense of a programmed experience. The schedule is **tied to record releases**. It announces when new albums / material for an album will go up on the program. Making ownership of the CD a requirement to entering the listening room limits interference by undesirables.

The inside of the listening rooms will be set-up as follows:

- **Chat Window.** As the member enters the space, his CD synchronizes to the room's master clock and skips to the part of the CD everyone else is listening to. Members thus have a common music background, and can chat regarding the album's few last riffs or any other topic they choose. Because members are required to own the CD in order to enter the room, members inside a room will tend to have more affinity than a group of

randomly assembled people. Although NMC chat will eventually incorporate all the bells and whistles of virtual worlds, chat will originally be limited to basic "off-the-shelf" chat with a few enhancements (e.g. "This sucks" taunt button).

- **Surf Window.** Members inside the room can surf various web pages together while listening to the music. Users can select from a set of bookmarks related to the album (e.g. band FAQ, discography, et c.). Surf can be monitored by guides (see below).
- **Control Functions.** Rooms can be set-up with different control parameters. In a **Linear Listening** room, the CD plays from beginning to end without interruption. Members control their own surf windows. In a **Guided Listening** room, one user controls the experience. With the help of an on-screen "controller", the user can skip tracks, repeat passages, choose pages to display in the surf window, et c. Users with long experience on the service could be given those special guide privileges, along with the usual policing attributes of chat-room moderators (e.g. "boot"). Guides can also be staff or celebrities. In a **Collaborative Listening** room, the controller changes hands from member to member. Providing control to users empowers them to illustrate the subject of their chat (e.g. "I love this riff").
- **Automatic Notification:** on request, members receive e-mail notification of the next time their favorite CD will be played in a listening room.

Program 2: Net Enhanced-CDs

NMC will provide Enhanced-CD-like experiences across the net. For this purpose, users will be able to use regular audio CDs, as all the computer data will come from ION's server. The graphics provides a synchronized enhancement to the CD experience, making it something of a "Net Enhanced-CD" or a video juke-box where the user provides the CD and the net provides the images. Music labels will have an incentive to provide elements for these functions as a way to enhance the listening experience for their CDs compared to those of their competitors, and ION will try to secure the album booklets' electronic publishing rights. The graphics displayed will vary across a wide range:

- **Animations.** ION has developed web-based animations that synchronize to the CD for the whole length of a song. Animations can be **specific** to the song, or **generic**: designed to fit a whole range of songs (e.g. animation for slow love song, or up-tempo rap song).
- **Pictures** or graphics that are **triggered** at certain points in the music,
- **"Point-and-Click Lyrics"** that highlight as the music plays and that users can click on to go to a place on the CD,
- **Algorithmic** or **generative** graphic engine animating a few elements, or pulsating to the CD's beat, in a bandwidth-economical way,
- **Streaming video,**
- et c.

Program 3: Recorded Guided Tour (CD-TOUR™).

NMC will provide guided tours of some albums, which users will be able to take individually at anytime. Guided tours can either be provided by independent individuals, or spun off from chat sessions with the artist, where the artist comments on

the album, e.g.: "this line refers to the trip to Canada I took when I was in high school". The guided tour is a control file which contains a list of events to trigger at certain times in the experience. For instance, the file can display some explanatory text as it plays certain passages of the CD. The text might say: "I used a variant of this riff on the seventh track... listen", while the CD plays the appropriate passages - whole songs or snippets, playing linearly or skipping back and forward depending on the format of the tour. The tour is an extremely low bandwidth experience that provides great value for the fan (e.g. Bono guides you through the new U2 album).

In addition to text and CD time codes, the control file can contain names of images or videos to display at specific times. Interactivity can also be introduced by letting the user make choices during the tour (e.g. "would you rather now hear me comment on track 3, or on the use of synthesizer throughout the album?").

Program 4: Virtual Venue

The virtual venue will attempt to create the atmosphere of a real venue, on-line.

- **Stage.** Scheduled events will take place. For instance, there will be broadcasts of concerts, with an associated video screen. The broadcasts, which may be real-time or retransmitted, will provide the broadcaster with an opportunity to promote a band or sell merchandise. The stage may be used for a number of other purposes. For instance, it can be rented by a record company wanting to do a release party for an album. The concert hall will provide a larger audience than the listening rooms, and will let the label broadcast whatever they want - as opposed to a CD simply playing. The label can broadcast a number of elements concurrently (text, audio, images). NMC's broadcast channel, used jointly with promotions such as sweepstakes, will make a powerful promotional tool.
- **Green Room.** This is a place where members can hang out before an event happens on the stage. In the case of a concert, members might be able to walk through the guitar player's guitar collection, take a tour of the dressing room or sample advance material.
- **Foundation Room.** A place for VIPs to hang-out, exchange gossip and conduct business. Access is provided to music industry people, underwriters, band members, et c.
- **Back-Stage.** To access the back-stage, one must be an **active member**, as defined by having been a member for over a month, having accessed the site more than ten times overall and having accessed NMC at least twice in the preceding month. The back-stage will feature after-show parties and pre-edit cuts of the events' best moments.
- **DJ.** One room of the venue is animated by a DJ. The room provides the usual chat functions as well as streaming audio for sound.
- **Audition Room.** This will be a place for new bands to broadcast their music. This will be a good way for new artists to gather feed-back: the audition room will let users rate each individual tune, and will also accommodate chat functions. Because of the ease with which new artists will garner feed-back across a broad section of listeners, the audition room can become a quite sophisticated A&R tool for A&R executives, who will have at their fingertips a novel way to gauge what might or might not sell.
- **Open Mike.** Members stand in line to broadcast music pieces.

- **Store.** Members can visit the store to purchase CDs, tickets and merchandise. Store functions are also integrated throughout the channel with "Buy" buttons.
- **Marquee.** A marquee announces upcoming events, e.g. "Soundgarden at 8pm".

Program 5: Collaborative Jamming

Ideally, users would connect their musical instruments to their computers and jam on-line with members thousands of miles away. However, latency issues which are critical to musical expression may never allow this, regardless of how much bandwidth improves. ION has many creative ideas as to how to overcome these intrinsic limitations and how to let users express themselves musically together across the net. ION has experience in the field of virtual instruments with Jam Session, which was co-programmed by CEO Ty Roberts. Jam Session was one of the first programs letting music neophytes "jam" by way of constraint-based filtering algorithms and of a friendly graphical interface.

Program 6: Personality Show

This program will feature hosts - either regular hosts or contributing personalities - who will guide members through music. Celebrity chat can be taken to the next level with the live version of Recorded Guided Tours: a band can come on-line and comment on their latest album not only by chatting but also by sending control codes that display graphics on users' screens and play music off their CDs. A contemporary music critic could say "show up for next Tuesday's show with the following five CDs, you'll need them". Users would have the option of purchasing the appropriate CDs at a discount.

Program 7: Net Karaoke

The experience described in Program 2 as "point-and-click lyrics" can easily be modified to fit a Karaoke system, where lyrics highlight syllable-by-syllable as the CD's music progresses and an appropriate slide show is displayed.

Other GUI Features

- **Waiting Room:** Currently, web services do not put a ceiling on the number of people who can access their sites at a given time. As a result, the quality of the experience degrades as the number of users increases. In contrast, NMC will operate under the assumption that most of the time, it is better not to be connected than to be connected at less-than-par speed. NMC's logon server will be separate from the program servers, and will assign priority numbers to members when the programs overflow. Members will be able to continue surfing the web, and will receive a pop-up notification when space becomes available on NMC. Alternatively, users can wait for their admittance notification while being entertained at lower bandwidth (e.g. playing games) in NMC's waiting room on the log-on server.

- **Preview Mechanism**

ION will use streaming audio as a means to provide a taste of the programs to users who do not own the CDs, and hopefully generate "wish-you-were-there" feelings that will incite them to buy the albums ("buy buttons" connected to an on-line fulfillment store will facilitate such transactions). The GUI to most previews will be the

MusicCaster, a guitar-shaped interface that lets users select programs by turning knobs (e.g. rock/alternative/rap lever et c.)

• **Show Grabber**

Custom TCP/IP software automatically dials at night and downloads the graphics to specific programs in advance to let users enjoy the programs with minimum wait - at program time, bandwidth economical elements will come across the net while large graphics will be cached on the user's hard-drive.

• **Content on Disc.** ION will incite music labels to place things on the CD that are compatible with NMC. For instance, at the end of the audio track, labels could as a matter of routine add a few standard files (e.g. lyrics, cover art, video for the single, graphics for the album's listening room, et c.). Those standard files (which in a way would make the CD the equivalent of an Enhanced CD without an interface - the interface being NMC) would be retrieved by NMC during playback, and would allow to overcome bandwidth limitations.

Phases beyond...

ION will continue to improve NMC such that it retains its edge as the most entertaining music site on the world-wide-web. Although it is hard to strictly define today what the future programs and features will be, the realm of possibilities, based on the technologies to come, is really endless. Some possible extensions could be:

- distribution of NMC's graphics and software libraries on a CD as **NMC Gold**, which users will install to their hard-drives, providing them with a sharper, speedier experience as less information needs to come across the net,
- as the NMC brand develops, opportunities for merchandising will appear. For instance, in a venture with music labels, ION could launch a **CD music magazine** which subscribers would receive monthly. The CD would be a compilation of the tracks corresponding to the animations to go up that month on NMC,
- use of **video conferencing** within listening rooms,
- as the membership base grows, broadcast messages will become increasingly targeted and relevant to individual users, (e.g. "check this band in your town next week"),
- extension of listening rooms to viewing rooms for DVD,
- use of **agent technologies** to guide users to new content they might like - the database of CDs owned by users would make it possible to steer members into chat rooms filled with people who share the same musical tastes, and for NMC to recommend CDs for them to listen to together based on which albums they own,
- addition of a **bar** to the list of rooms on the venue. The bar may be linked to some actual Cybercafes where NMC stations will be mounted with digital cameras. The stations will enable actual interactions between the bar-based users and those accessing the Net from other locations,
- improvement of the audition room, where instead of playing tapes of aspiring artists, NMC will make live broadcasts from a **broadcast van** parked outside people's garages,
- improvements in bandwidth and avatar technology may make it possible to have a **virtual mosh pit** in front of the stage,

- improvements in bandwidth through satellite or cable modems, combined with the advent of set-top boxes, will call for a special TV format as the NMC user moves from the computer desk to the living room's sofa,
- the Virtual Venue will evolve toward a VRML world which will make the passage from one room to another very intuitive. The venue will expand to include thematic rooms corresponding to different music styles. Experience shows that letting users customize their web experience helps build a site's traffic, a phenomenon from which ION intends to fully benefit: the Venue will include an avatar builder, a room builder and a venue builder - so that the environment might look like Carnegie Hall or the Oakland Coliseum, etc.

THE REVENUE MODEL

Subscription Revenues

ION operates under the assumption that if the site is not worth paying for, it's not worth making. The Net Music Channel will be a paying service. A free version with restricted features, which will serve as a teaser, will also require a sign-up process. Revenues from members will come from:

- Basic Membership Fee

Members will pay \$3 per month or \$25 per year.

- Special Events

NMC will organize some special events, such as broadcast of live events or panel discussions. Special events will be available both to members and non-members, at different rates. Some events might be free for members and be charged five dollars for non-members, et c.

Advertising Revenues

NMC's advertising clients fall within two main categories: music labels and others. Generic corporate sponsors will be able to target their audience thanks to the information NMC collects about its members. For instance, when logging on, a 44-year old who listens primarily to jazz might receive an ad for Seagrams gin, a car or a jazz concert in her town; while a grunge teenager might receive an ad for Banana Republic, a new movie or a subscription to Net Gamer. In the case of music labels, NMC's privileged information about members' listening patterns (NMC will track which CDs users play) will lead to much more elaborate products. NMC will offer the following advertising products:

- Generic Banners Ads

Banner ads are simple chunks of NMC "real-estate" with a commercial message. Clicking on the banner enables the user to learn more about the offering. Click-through ads can range from simple copy to virtual product demos using sound, video clips, animation, games, et c.

- Targeted Banner Ads

While generic banner ads are shown to all NMC users, targeted ads are seen only by a subset of members. Advertisers will be able to target members based on:

- demographic data; users provide this data at registration time. This data will allow NMC advertisers to target users based on age, gender and income. Through the Net Music Channel, advertisers can also target specific geographical markets by making use of members' zip code information.

- music listening habits; while many sites collect demographic data about their users, NMC's ability to keep track of CDs played by users will be unique and will provide the music industry with a powerful tool. For instance, Tower Records will be able to reach all NMC viewers who play Prince albums and tell them about a promotion on the latest release. Music label executives will virtually be able to pick up the mike and say "Buy the new Michael Jackson CD". Also, ION will be able to provide a different audio track for the same visual ad depending on the user's listening habits.

- **Interface-Integrated Ads**

Ads will be more effective if they are integrated into the interface, as opposed to sitting somewhere on the border where they are more easily ignored. ION's animation expertise will let us accomplish such seamless integration. For instance, whole listening rooms could for a month take the shape of a Nissan Pathfinder, where car controls would correspond to chat controls, with chat appearing on the windshield. Ads could animate on the walls of the virtual venue; et c.

- **Tests**

NMC will let advertisers test consumer response for the three above ad categories. Advertisers will be able to test different ads on specific demographic, geographic and music markets.

Transaction Revenues

ION will take 5% of all transactions occurring on-line through the Net Music Channel. These transactions will include:

- Purchases from the situation-sensitive "Buy" buttons scattered through NMC. For instance, inside the Smashing Pumpkins listening rooms, one will be able to purchase the band's CDs, concert tickets, T-shirts and other merchandise.

- Purchases from the NMC on-line store.

- Purchases from click-throughs on banner ads.

In addition, ION believes that the successful development of NMC into a strong brand will lead to additional merchandising opportunities, such as NMC books, NMC magazine, monthly NMC CD compilation corresponding to new animations on the site. Indeed, if NMC is successful, its brand may become its single most valuable assets, with revenue opportunities far beyond the assumptions of this business plan.

Programming Revenues

While users may have access to a vast amount of static content on NMC, a large part of the draw will be the dynamic content of the various programs. The model for that dynamic material is very much that of a channel, where the amount of content is necessarily limited and subject to the channel's programming. ION chooses what goes into the 100 listening rooms of NMC. As the channel gains momentum, labels will be paying to rent some of those rooms (programming space), as they now sometimes pay to have videos aired on MTV. Programming revenues will be made of:

- Listening Room Rental

At any given time, music labels will be able to book ten percent of the rooms on NMC for albums of their choice. Labels will have some amount of control as to what goes into those rooms: they will be able to choose a listening mode for the rooms (guided, et c.); to make their artists appear in the rooms and chat with the audience; they will have access to the chat's script; et c.

- Virtual Release Parties

NMC will host limited-time events that will take up interface space. A virtual release party may be a room featuring chat, interview snippets, sound and video samples, buy buttons, sweepstakes et c.

- Virtual A&R

NMC will let members rate bands they hear in the audition room. These ratings, combined with their users' listening profiles, will be a helpful way of knowing whether bands will sell. Labels will be able to :

- subscribe to NMC's ratings reports
- submit bands for rating, for a price. A comprehensive ratings package might include quantitative data as well as qualitative data extracted from focused chat. Quantitative analysis (possibly backed-up by AI) on the ratings and the profiles of the rating members would help determine a marketing strategy for the band.

- CD Ratings Reports

On request, NMC will provide music labels with reports on individual albums. The reports will include quantitative and qualitative data similar to that of the A&R reports. In addition, the report will include track data, i.e. what tracks on the CD get listened to the most et c.

- Content Hosting

While in the early stages ION will encourage labels to provide content for NMC, when the service gains momentum ION may be able to charge for hosting or linking content to albums and artists.

- Waiting Room Hosting

For a fee, NMC will absorb traffic from other overflowing sites into its waiting rooms. Users will be pushed back to their original provenance once space becomes available there.

- Original Content Licensing

ION will archive its programs, thus creating a library of content for potential future use. Such content may become valuable in the future (e.g. footage of a chat session with an unknown band).

Technology Licensing Revenues

ION will license its technology on a project-by-project basis. The following are examples of likely licensing arrangements:

- Children's Market (and other vertical markets)

ION has entered discussions to make an on-line CD controller that would synchronize character animations to children's CDs.

- Graphics Engine

ION has sold a license to some of its code to Vusic, a product that creates graphics on the fly which synchronize with the audio CD. ION could enter into such an arrangement for synchronization over the net.

- **Recognition Database**

As ION's database of recognized CDs grows, it will become valuable for third parties in conjunction with the recognition algorithm (CD-SUSTM). For instance, the database could allow CD-controllers shipping with the Mac and Windows operating systems to automatically display the names and track titles of albums played in users' CD-ROM drives.

It is fair to assume that in developing NMC, ION will constantly create technologies the use of which won't be specific to NMC but which will have commercial value for other web services.

Production Revenues

ION will do production work on a work-for-hire basis for projects that are synergistic with NMC. These will include:

- **Shockwave or Java Ads**

ION's experience of making animations over the net will translate well to net advertisements. A by-product of our engineering effort will be technologies that let us push the envelope of the interactive ad (e.g. engine that animates a given ad to the beat of the CD the user is listening to).

- **Synchronized Animations for CDs**

Artists or labels may be willing to pay for the animations that will appear in Program 2 in order to promote their records. Net Enhanced-CD animations are a good alternative to E-CD for artists or labels who want to do only one song, or who may be wary of including time- and platform-sensitive computer data on a physical disk. ION is currently negotiating a contract for twenty song animations.

THE MARKET

There is a wide range of fluctuation for internet-related statistics. The numbers we use are "reasonable estimates" based on a variety of sources.

The Internet and On-line Market

Internet

Although the internet dates back several decades, the web, which was developed at Switzerland's CERN in 1992, is a recent arrival. The web's growth has been explosive, with over 25 million users worldwide and 200,000 web sites offering 20 million pages of information. Morgan Stanley predicts that there will be more than 150 million web users by the year 2000. Hambrecht & Quist predicts that the global internet market will reach 23 billion dollars by year 2000, 10 billion of which will come from content.

On-line

With the explosion of the internet, on-line services are having to rethink themselves. All three major on-line service providers (AOL, Compuserve and Prodigy) have modified their product offering such that they provide internet access like regular ISPs. There has been speculation that the web would mark the death of on-line services. This is unlikely if on-line services, which are a superset of the web, continue to provide some hard-to-replicate advantages:

- ease-of-use through integration and proprietary interface design, which is an important characteristic for the second-wave of less computer literate adopters now hitting the web / on-line world,
- a clear revenue model for content providers (through hourly access fees), which is important in order to justify the budgets required for a media publisher of consequent size to develop an adequate offering.

The top four on-line services (Microsoft included) now have a combined subscriber base of 11.8 million.

Broadband

A year ago, broadband networks seemed as distant as the middle of the next decade. Today, it seems that broadband may become a reality - at least for some - as early as next year. Sunnyvale-based @home is the most visible of the companies trying to make ground in the broadband industry. However, there exist a multitude of companies developing broadband technology - whether cable-based, satellite-based or phone-based. In parallel, there is great momentum behind the development of an internet set-top box, with competitive offerings from (among others) Oracle, Sun and arguably Apple (Pippin). The one thing that will be missing from the equation is content. Although several companies (one of the most prominent being Microsoft) have invested in digital studios for the purpose of developing interactive content, it is yet unclear what that content will be. The one certitude is that it has to be different from traditional broadcast content in order to be compelling. ION aims to provide some of that content through NMC.

The Customer

NMC's customers fall into two groups: end-users and corporate clients.

End-Users

There are 10 million US home web users. Although the current growth rate (100% yearly) is clearly not sustainable, there are already 33 million US households equipped with computers; combining multiple users per households with the impact of the 500\$ internet box, a **five-year target of 50 million users** seems reasonable.

Key demographics for web users are as follow: only one third are female; the median age is 30; 93% of users have some college education; average household income is around \$60,000. One survey shows that 70% of web users fall into the psychographic categories of Actualizers and Experiencers, which tend to be innovators. NMC will first **focus on the 15-30 age group**, which offers the best cross-demographics between the music industry and the internet (it represents 44% of CD purchases; MTV's target age group is the 15-34).

Web users spend over three hours on-line per week, with the average session lasting over an hour. The most common access platform is Windows (62%), followed by Macintosh (21%). Web access is still a low-bandwidth experience, with only 20% of net surfers at speeds above 14.4Kbps. Bandwidth limitations are an advantage for NMC, as for most programs the audio will come from the CD, rather than across the net and consuming CPU cycles.

Clients

• Corporate Sponsors

In the fourth quarter of 1994, WebTrack identified 270 web advertisers, with budgets ranging from \$5,000 to over \$500,000. The top ten spenders represented 26% of the total \$12.4M expenditure. Those sites were AT&T, Netscape, the Internet Shopping Network, NECX Direct, Mastercard, American Airlines, Microsoft, c|net, MCI and Sportsline, each with budgets over \$200,000. Those numbers are somewhat mitigated by the existence of barter practices between sites, which do not involve the exchange of hard cash. In general, it is fair to say that web advertisement is still at experimental stages. In light of the ten billion dollars spent each year for network TV advertising in the US, there is clearly room for the market to grow from Q4 1995's \$50M annual rate.

• Music Labels

ION already has firmly established relationships at all of the major music labels due to its services as a producer. ION is a well-known name and respected entity at all of the labels. Due to its contacts, ION's task of evangelizing NMC to the labels will be greatly facilitated. Although all of the labels have established new media departments, it is in general fair to say that there are still relatively few technology savvy people at the labels, leading them to rely heavily on outside help for technology.

Satisfying the Customer: NMC's Unique Selling Proposition for Advertising

By successfully patenting its technologies, NMC will be a unique system that will provide a level of entertainment quite extraordinary for the web. This will in turn lead to high traffic on the site, which is key to generating advertising revenues.

NMC will provide a **Unique Selling Proposition** to advertising customers by satisfying what has been dubbed the "Five Cs" of on-line advertising:

Cost

NMC will maintain rates that are competitive with other on-line advertising vehicles. The pricing structure for web advertising is not yet well established; prices currently fall within a CPM (cost per thousand) of \$30 to \$200. At the low end are generic billboard-type impressions. At the top end are impressions for which the content provider is able to deliver a specific set of demographics to the advertising client. The pricing structure will probably continue to evolve to distinguish click-throughs, i.e. instances where a user clicks on an advertising banner to request more information. Procter & Gamble was able to establish a precedent by negotiating a contract with Yahoo! whereby they would be charged only for click-throughs. It seems reasonable to expect that pricing of on-line advertising would evolve toward something like a \$30 CPM for generic impressions (which compares with a \$70 CPM for outdoors billboard impressions); a \$100 CPM for targeted impressions (which compares with CPMs in the hundreds for print magazines); and a CPM of \$250 for click-throughs, which compares to the \$1000 CPM for opened pieces of direct mail.

NMC will enable precise **targeting**, thus enhancing the ads' efficiency. NMC will maintain a database of information about each user. First off, NMC will gain information pulled from the end-user at registration time - such as age and income group. Second, NMC will obtain information pushed from the end-user, whether voluntarily or not. For instance, a user who rates an album voluntarily pushes information to the system. A user who inserts a CD into his CD ROM drive involuntarily pushes information on to NMC. Through the use of regressions or AI algorithms on member data, ION will be able to deliver stratified selection to a level of fine detail. ION believes that NMC will enable the company to gather more information about its end-users than most on-line services, and that this in turn will provide the company with a competitive advantage in selling advertising space.

ION also hopes that the unique entertainment value of its service will enable it to grow the end-user base quite aggressively, thus giving NMC excellent **reach**.

Content

The key to drawing users to the site is content that is both **compelling** (to get users on the site in the first place) and **fresh** (to ensure that members come back for more). NMC's content will be compelling - our proprietary technologies will enable us to deliver exceptional net-based music entertainment. Also, NMC's content will constantly change, both because of new album releases and because of constant feature upgrades.

Context

The effectiveness of an ad is highly dependent on the context within which the message is delivered. NMC will provide an ideal platform for advertisers to reach their target. The nature of the service lends itself well to ad blending. For instance, teenagers, who are used to seeing ads when watching MTV, will not be surprised to see those same lifestyle advertisers on NMC. By providing entertainment, NMC

lets advertisers convey their message at the time when they are the most receptive. One is clearly more receptive to the idea of buying a car when one is enjoying oneself than when one is absorbed in work - e.g. busy doing some research through a search engine. For the music labels, the ad / context relationship is even stronger, as the ad is the natural extension of the content (e.g. "you listened to the Smashing Pumpkins' CD, did you know they're playing in your town next month?"). Even for generic sponsors, ION can enhance the context relationship by blending the ad into the interface - for instance, the interface used to control the CD might be made to look like a car or a bottle of coke. This transforms the ad itself into actual entertainment, providing the web equivalent of the "infomercial" or "advertorial".

Control

An important factor for advertisers is to be able to control what they spend and how they spend it. ION will respond to these needs by being extremely flexible. NMC's environment lends itself well to customization - e.g. a sponsor's banner does not necessarily have to be in the top inch of the page, but could be incorporated in different ways. Flexible banner arrangements increase an ad's effectiveness - if the user can predict that an ad will be on page two of a magazine, she might turn the page without even looking. ION will also provide several rate options for advertisers to choose from, so that the cost of the campaign meet their objectives. Different goals might be:

- fixed cost: ION will provide a fixed rate for fixed numbers of impressions. When the target number of impressions is reached, the ad will roll off.
- fixed time: ION will provide rates for ads to be displayed by the day, week, month et c.

ION may develop proprietary software to manage ad rotations on the site, or may choose to license an off-the-shelf solution, such as NetGravity's AdServer web advertising management software.

Counting

An important factor in selling ad space is the ability to provide sponsors with credible numbers as to the ad's reach (how many separate individuals are exposed to the message) and GRP (Gross Rating Points, i.e. total number of impressions, including duplications). Hits are an unsatisfactory measure of web traffic as they do not measure individual visits. ION will have two ways of providing sponsors with the actual data:

- because NMC is a membership-based service, ION can keep track of who looks at what.
- ION will use the services of an external auditor. Several companies have established to provide such services (NetCount, Webtrack, I/PRO). ION already has a relationship with San Francisco based I/PRO (ION developed I/PRO's multimedia presentation for Internet World 1996), which it intends to cultivate.

MARKETING PLAN

NMC is both a technology company and a channel. Similarly to the broadcast world, the channel will largely be dominated by ratings, the object of the "game" being to attract and capture the on-going attention of consumers. ION's unique angle on attracting consumers is to leverage an already hugely successful product, the audio CD. Through ION's technology, NMC will add value not only to newly released audio CDs, but also to CDs which consumers might have purchased 10 years ago. NMC enlivens a consumer product which never anticipated multimedia, and consumers will be thrilled to find that dollars they spent ten years ago are still buying them fresh entertainment. ION calls this marketing concept "life after shipping". This value-adding technique will first attract users to the service; providing compelling content will keep them there.

The marketing of NMC will be one of ION's most critical tasks. Indeed, NMC is a service, with a large number of customers to satisfy, some with different needs - end users and clients. In order to attract and retain advertising clients and content providers, NMC will first need to develop a strong end-user base. It is thus primordial for NMC to quickly establish brand recognition and thus to have a powerful launch.

Launch

ION will advertise the Net Music Channel to maximize visibility to end-users. Initially, ION will pursue web-only advertisement. Where possible, we will use barter with technology partners - for instance swapping banners between sites. Concurrently to advertising, ION will seek as many links as possible on search engines and directory tools in order to build the NMC brand name. ION will leverage its strategic alliances, as they are struck, to release press announcements which will enhance sponsor awareness.

Maximizing Penetration

- ION will use advertisements in targeted magazines such as Rolling Stones and Wired to attract the largest possible number of end-users.
- NMC's ability to be customized by users will be a factor in attracting members.
- NMC will let users register for a free version of the Net Music Channel, which will demo the capabilities of the channel across a narrower range of content.
- Special events, also accessible for a fee to non-paying members, will encourage people to go through the registration process.
- When CDs from eclectic bands are being played, ION will post announcements to the appropriate news group.
- ION will attempt to develop "joint membership" programs with services enjoying large installed bases.
- Ultimately, the best way for NMC to grow its membership base will be to be as close to the interface as possible. Ideally, ION wants to become a button on the desktop, or a button inside the browser.
- NMC Gold's graphical interface will make it a prime candidate for OEM hardware bundles.

Distribution Channels

At first, ION will provide access to NMC solely through the internet. Mid-term objectives will be to extend NMC's distribution, both in order to gain a wider membership base and to position ourselves for acquisition by a broadcaster. Additional distribution mechanisms will be:

- On-line service

ION will attempt to make NMC available through AOL, Compuserve or the Microsoft Network.

- CDs

ION will attempt to create an alliance with a major music label, such that NMC's graphic-intensive version (NMC Gold) be distributed as the ROM portion of some Enhanced-CDs.

- Licensing

ION will license its second-to-best technologies to competitors, so as to provide an easy technology solution discouraging heavy R&D investments in the field.

Customer Service

ION will strive to maintain exemplary customer service as a way to differentiate itself from other web services.

- Members will receive 24-hour on-line support via e-mail and chat boxes. ION will be sensitive to members' needs for confidentiality of information. ION will never pass along members' addresses, telephone numbers or e-mail addresses to its clients. Instead, ION will let users be known to clients as their aliases on the service (i.e. Paul Smith may be known as Tarzan24, not his real name). All solicitations will happen through NMC, reducing members' potential fears of getting swamped by unwanted calls or mail or e-mail.

- Corporate clients will receive immediate attention from ION's management, sales and technical staff. ION will be attentive to always improve the value proposition for its paying clients by introducing new services, providing customized reports and altering the pricing structure in order to remain competitive.

STRATEGY

Strategic Alliances

The web is witnessing and will continue to witness a proliferation of services, many of which are competitive to NMC in one way or another. As larger corporations, who were standing on the sidelines, enter the market in force, being associated with larger companies will become a key ingredient to survival for smaller businesses. ION will seek alliances with the following types of companies:

- Music label; although ION wants NMC to be "label agnostic" on the outside, ION will seek a privileged relationship with a major label in order to jump-start the content acquisition process. For historical reasons, the most likely candidate is currently MCA (one of ION's former employees is now V.P. of Interactive Programming at MCA).
- Web Advertising Agency; a close working relationship with an ad agency will facilitate client acquisition. The most likely candidate is currently Modem Media.
- Browser Software company; ION wants NMC to be as close to the browser's navigation buttons as possible.
- Online service; online services need differentiating content, and make most of their money on chat. NMC has both, and could benefit from an online service's delivery pipeline.
- Technology providers; ION combines its proprietary technology with off-the-shelf technology to create NMC's compelling environment. NMC will be an ideal place for some companies to demonstrate their technologies; close relationships will ensure that we always have their most advanced product. Likely candidates are I-Chat and Macromedia (with which ION employees have close relationships for historical reasons).
- Other membership-based service: ION will explore ways to boost its membership base by letting members of other services automatically become NMC members (and vice-versa).

Label Relationships: The MTV Model

ION believes that there is a precedent to be followed in the path of MTV's rise to media superpower. MTV started small and were then not perceived as threatening by the music labels. They did not cut into record companies' core business (record sales) and in fact complemented it: MTV was a new, exciting way to promote albums. The early challenge for MTV was to procure content. They had to convince music artists to explore the medium of music videos, and music labels to pay for their development. Because production costs were small, record companies were at first willing to dabble, and either they or the artists owned the video. At that time, MTV derived its revenues from cable companies, and those revenues were perceived as small change by the labels. When the cost of music videos began to soar, record companies began to balk at paying for a promotional medium with no trackable revenues attached. MTV then proposed to foot some of the production costs against the exclusive license to broadcast the videos and the right to bring in advertisers. The labels accepted, and a virtual monopoly was created.

Today, ION is in a similar situation to MTV in its early days. NMC will be non-threatening to music labels as:

- it will promote the albums; indeed NMC will do a better job of that than MTV in that it will actually require users to own the CD - whereas MTV does not require a record sale and is often turned on and off like a radio,
- the medium is new and music labels are uncertain that the on-line experiences we provide actually enhance the albums, and
- music labels will not consider the initial revenue streams as significant. Like MTV, NMC has the opportunity to build a brand by exploring a new medium while locking up the rights to the content for that medium. Just as music videos became less experimental over time, NMC will progressively refine the experiences it overlays on top of the audio CD, and the rights to those experiences will become more valuable.

Proprietary Technology

ION has developed the cross-platform CD-control code that is integral to most Enhanced-CDs published to this day across all music labels. ION's ability to use that code (co-owned by Macromedia), which is central to synchronizing CDs to the internet, puts us one step ahead of the competition.

NMC will be based on several unique technologies, which are briefly described below:

- **ION Technology 0002-0000: CD Control From Net With Status**

Description: enables internet applications to speak to user's CD ROM drive and get values back from it.

Implementation: Shockwave application resident on web page speaks to DLL (Windows) or Xobject (Mac) that issues commands and feeds back status from the CD ROM drive.

Applications: Audio CD controller displayed on a web page, which lets users play tracks, skip, et c. and displays track numbers, play times, et c; image map of song lyrics which allows user to skip to place in the CD by clicking on the appropriate lyric; other metaphors for CD control (e.g. clicking on a slice of pizza plays track one).

- **ION Technology 0002-0001: Net Synchronized to CD ("CD-NETSYNC™")**

Description: allows web-based experiences to synchronize to audio CDs, enabling high quality multi-media experiences over the net.

Implementation: Shockwave application resident on web page speaks to CD ROM drive using Technology # 1, and displays graphical elements based on the time status reported by the CD player.

Applications: Song animation within a web page, synchronized to audio CD; Video animation within a web page, synchronized to audio CD; Slide show within a web page (combining images, text, other multimedia elements displayed in different parts of the screen), synchronized to audio CD; algorithmic image composition within a web page, synchronized to audio CD...

- **ION Technology 0002-0002: Universal CD Recognizer ("CD-SUS™")**

Description: recognizes Audio CD in user's CD ROM drive across the net.

Implementation: Shockwave application resident on web page speaks to CD ROM drive using Technology # 1, queries information from drive, derives unique identification code from values returned, looks up code in table, which returns information about CD. Table can be internal to the Shockwave application, reside on the user's hard drive or reside on remote server (queried by the Shockwave application through CGI).

Applications: Trigger events within web browser depending on which CD is recognized. E.g., make (through Shockwave or CGI) browser switch to appropriate web page for the album recognized; make browser switch to appropriate chat room for the album / artist recognized; display ads or messages tailored to characteristics of the album recognized; display information returned by database about the album: appropriate track names for the track being played, lyrics, et c.

- **ION Technology 0002-0003: CD Watcher**

Description: keeps track of CDs being played by user (CD names, tracks played or skipped, et c.).

Implementation: Shockwave application resident on web page determines CD being played by user using Technology # 1 and Technology # 3. User is uniquely identified through login procedure. Shockwave application stores user's CD usage information into log file on server.

Applications: Database is used to provide user with tailored messages (ads, event announcements) depending on his listening habits. Database is used to compile correlations about users' tastes across music genres. Database provides feedback to music labels on tracks played on particular CDs.

- **ION Technology 0002-0004: Net Listening Rooms with Chat ("MUSIL™")**

Description: multiple users listen to the same CD in synch in dedicated chat rooms inside their web browsers.

Implementation: Shockwave application resident on web page speaks to CD ROM drive using Technology # 1, recognizes CD based on Technology # 3 and synchronizes itself to time on master server through CGI. Application switches to appropriate chat room on web server based on CD. Chat script (C code) on server calls other Shockwave application, which makes the CD play at the same place for everybody in the chat room in synch, and displays appropriate graphics / information for CD.

Applications: Net chat environment with listening rooms for popular CD, where users chat while listening to CDs in synch.

- **ION Technology 0002-0005: Synchronized CD Tour**

Description: script file called from web browser controls user's CD player and web browser display.

Implementation: Shockwave application resident on web page reads script file on server. Script file feeds Shockwave application with information to display graphics and control the CD. Shockwave application speaks to CD ROM drive using Technology # 1 and displays graphical elements based on information provided by server, with timing and interaction specified by script file.

Applications: Downloadable interactive tour of specific audio CD, hosted by music artist or critique. Tour comments on certain passages, forces pictures to be displayed on users' screens, causes users' CD to play specified passages, provides user with choices of avenues to explore, ...

• **ION Technology 0002-0006: Live CD Tour Broadcast System**

Description: host controls and synchronizes CD players and web browser displays of multiple users across the net.

Implementation: Shockwave application resident on web page synchronizes itself to time on master server through CGI. Server feeds Shockwave application with information to display graphics and control the CD. Shockwave application speaks to CD ROM drive using Technology # 1 and displays graphical elements based on information provided by server, at times specified by server.

Applications: Music artist or critique provides live "tour" of new audio CD: artist comments on certain passages, forces pictures to be displayed on users' screens, causes users' CD to play specified passages, ...

ION will attempt to patent its technology and concepts as it creates them. Initial response from patent counsel for the above technologies is favorable.

Please return this card, indicating receipt date and Serial No., if applicable, of the following
REQUEST FOR RECONSIDERATION; ONE-MONTH EXTENSION OF
TIME; RULE 1.131 DECLARATION AND CK FOR FOR \$110.00

Applicant(s): Dale Tyson ROBERTS et al.


Title: METHOD AND SYSTEM FOR ACCESSING WEB PAGES BASED ON
PLAYBACK OF RECORDINGS

Serial No.: 09/354,166

Filing Date: July 16, 1999

Docket No.: 1364.1001.D2/RAC

Due Date: JULY 6, 2000



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